

EXHIBIT A



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/227,863	08/27/2002	Attaullah Zabihi	13598-US	8111

23553	7590	01/08/2008
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 OTTAWA, ON K1P 5S7
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EXAMINER	
LY, ANH VU H	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
01/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/227,863

Applicant(s)

ZABIHI ET AL.

Examiner

Anh-Vu H. Ly

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☒ Claim(s) 8 and 30-45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. This communication is in response to Applicants' amendment filed October 19, 2007.
Claims 1-45 are pending.

Claim Objections

2. Claims 8 and 30-45 are objected to because of the following informalities:

With respect to claim 8, in line 8, replace "each on of" with --each one of--.

With respect to claims 30-45, in line 1, replace "human-machine interface" with --
computer interface--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Gai et al (US Patent No. 6,678,241 B1). Hereinafter, referred to as Gai.

With respect to claims 1 and 30, Gai discloses a method of provisioning a backbone VLAN (Fig. 4) comprising:

obtaining a least one backbone VLAN Identifier (Fig. 5C, RED VLAN);

selecting a plurality of backbone VLAN trunks (Fig. 2, trunks 248); and

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associating the backbone VLAN ID with each one of the plurality of backbone VLAN trunks (col. 7, lines 10-15, switches 230-246 associate their respective trunk ports that are coupled to links 248 with the VLAN designations or domains associated with the various LANs, hosts, end stations, servers, etc...);

the selection and association of the backbone VLAN ID with each one of the plurality of backbone VLAN trunks being undertaken irrespective of a one of an in-use and a stand-by designation of each one of the plurality of backbone VLAN trunks (col. 9, lines 34-37 and col. 10, lines 37-41, for each logical VLAN, the network administrator preferably defines a set of physical VLANs for association with the given logical VLAN. The set of physical VLANs associated with each logical VLAN are preferably configured and established so that, for every link 248 of network 200, there is at least one physical VLAN within that set whose loop-free topology has that link 248 in the blocked state. As illustrated in Fig. 5C, RED logical VLAN includes physical VLANs 10-13. Herein, each physical VLAN includes a number of trunks 248 for interconnecting the switches. Further, each physical VLAN is designated as ACTIVE, STAND-BY, and UNUSABLE. This implies that the trunks in the physical VLANs associated with each logical VLAN are undertaken irrespective of a one in-use and/or stand-by designation).

With respect to claim 2, Gai discloses tracking previously obtained backbone VLAN IDs (Fig. 5C, RED, BLUE, YELLOW, and GREEN identifiers).

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With respect to claim 3, Gai discloses generating the at least one backbone VLAN ID (Fig. 5C, RED identifier).

With respect to claim 4, Gai discloses generating a unique backbone VLAN ID (Fig. 5C, RED identifier).

With respect to claims 5 and 33, Gai discloses selecting all managed backbone VLAN trunks (Fig. 2, trunks 248).

With respect to claim 6, Gai discloses selecting all managed backbone VLAN trunks in an associated realm of management (Fig. 2, trunks 248).

With respect to claims 7 and 34, Gai discloses de-selecting at least one backbone VLAN trunk (col. 10, lines 42-43, the loop-free topology established for a first physical VLAN may have the link between switches 238 and 244 blocked).

With respect to claims 8 and 21, Gai discloses determining a plurality of stackable trunk ports corresponding to the plurality of backbone VLAN trunks (Fig. 2, ports 1-3 of switch 230); and associating the backbone VLAN ID with each one of the plurality of stackable trunk ports (col. 14, lines 28-30 and Fig. 3, there is at least one physical VLAN associated with the red logical VLAN whose loop free topology has port 302b blocked. Herein, ports 302a – 302c are trunk ports associated with RED identifier); the association of the backbone VLAN ID with each

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one of the plurality of stackable trunk ports being undertaken irrespective of a one an in-use and a stand-by designation of each one of the plurality of backbone VLAN trunks and each one of the plurality of stackable trunk ports (Fig. 5C, the trunk ports of physical VLANs associated with RED VLAN are undertaken irrespective of a one of an in-use or stand-by designation).

With respect to claims 9 and 36, Gai discloses selecting all managed stackable trunk ports (Fig. 2, trunk ports 1-3 of switch 230).

With respect to claims 10 and 37, Gai discloses selecting all managed stackable trunk ports in the associated realm of management (Fig. 2, trunk ports 1-3 of switch 230).

With respect to claims 11 and 38, Gai discloses de-selecting at least one selected stackable trunk port (col. 14, lines 28-30 and Fig. 3, there is at least one physical VLAN associated with the red logical VLAN whose loop free topology has port 302b blocked. Herein, port 302b is de-selected).

With respect to claims 12, 22, 28, and 39, Gai discloses issuing commands to the plurality of stackable trunk ports to enable support for backbone VLAN ID associated communications (col. 9, lines 26-29, to define the logical VLANs and assign membership, the network manager may use a convention Command Line Interface or SNMP).

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With respect to claims 13 and 40, Gai discloses selecting at least two tunnel access ports (Fig. 2, ports 4-8 of switch 230); and associating the backbone VLAN ID with the selected tunnel access ports (Fig. 2, port 8 of switch 230 and another port of switch 232 are designated as RED identifier).

With respect to claims 14, 41, and 42, Gai discloses issuing commands to the selected tunnel access ports to enable support for backbone VLAN ID associated communications (col. 8, lines 14-19, the configuration of the various ports 302 as access or trunk ports may be performed by utilizing a conventional management protocol, such as SNMP or Cisco-Works from Cisco Systems, Inc.).

With respect to claims 15, 23, 29, 35, and 43, Gai discloses issuing commands to determine a backbone VLAN provisioning status associated with at least one of a backbone VLAN, a backbone VLAN trunk, a stackable trunk port, a tunnel access port, and a VLAN access port (col. 9, lines 26-29, to define the logical VLANs and assign membership, the network manager may use a convention Command Line Interface or SNMP).

With respect to claims 16 and 44, Gai discloses defining at least one switching rule by specifying a one of a VLAN access port to VLAN access port binding (Fig. 3, block 314).

With respect to claim 17, Gai discloses a method of provisioning a backbone VLAN trunk comprising:

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obtaining a plurality of backbone VLAN IDs associated with a corresponding plurality of provisioned backbone VLANs (Fig. 5C, RED, BLUE, YELLOW, AND GREEN); and

associating the plurality of backbone VLAN IDs with the backbone VLAN trunk (col. 7, lines 10-15, switches 230-246 associate their respective trunk ports that are coupled to links 248 with the VLAN designations or domains associated with the various LANs, hosts, end stations, servers, etc...);

the association of the plurality of backbone VLAN IDs with the backbone VLAN trunk being undertaken irrespective of a one of an in-use and a stand-by designation of the backbone VLAN trunk (col. 9, lines 34-37 and col. 10, lines 37-41, for each logical VLAN, the network administrator preferably defines a set of physical VLANs for association with the given logical VLAN. The set of physical VLANs associated with each logical VLAN are preferably configured and established so that, for every link 248 of network 200, there is at least one physical VLAN within that set whose loop-free topology has that link 248 in the blocked state. As illustrated in Fig. 5C, RED logical VLAN includes physical VLANs 10-13. Herein, each physical VLAN includes a number of trunks 248 for interconnecting the switches. Further, each physical VLAN is designated as ACTIVE, STAND-BY, and UNUSABLE. This implies that the trunks in the physical VLANs associated with each logical VLAN are undertaken irrespective of a one in-use and/or stand-by designation).

With respect to claims 18, 25, and 31, Gai discloses obtaining backbone VLAN IDs associated with all provisioned backbone VLANs (Fig. 5C, RED, BLUE, YELLOW, and GREEN).

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With respect to claims 19 and 26, Gai discloses obtaining backbone VLAN IDs associated with all provisioned backbone VLANs in a realm of management (Fig. 5C, RED, BLUE, YELLOW, and GREEN).

With respect to claims 20, 27, and 32, Gai discloses disregarding at least one backbone VLAN ID subsequent to obtaining the plurality of backbone VLAN IDs (col. 6, line 59, numeric identifiers 0 and 4095 are reserved).

With respect to claim 24, Gai discloses a method of provisioning a stackable trunk port comprising:

obtaining a plurality of backbone VLAN IDs associated with a corresponding plurality of provisioned backbone VLANs (Fig. 5C, RED, BLUE, YELLOW, AND GREEN); and

associating the plurality of backbone VLAN IDs with the stackable trunk port (col. 14, lines 28-30 and Fig. 3, there is at least one physical VLAN associated with the red logical VLAN whose loop free topology has port 302b blocked. Herein, ports 302a – 302c are trunk ports associated with RED identifier); the association of the plurality of backbone VLAN IDs with the stackable trunk port being undertaken irrespective of a one an in-use and a stand-by designation of the stackable trunk port (Fig. 5C, the trunk ports of physical VLANs associated with RED VLAN are undertaken irrespective of a one of an in-use or stand-by designation).

With respect to claim 45, Gai discloses a network management system using the interface defined in claim 30 to effect backbone VLAN provisioning in a managed communications

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network (col. 9, lines 26-29, to define the logical VLANs and assign membership, the network manager may use a convention Command Line Interface or SNMP).

Response to Arguments

4. Applicant's arguments filed October 19, 2007 have been fully considered but they are not persuasive.

First of all, Applicants are suggested to replace the phrase "human-machine interface" recited in line 1 of claims 30-45 with "computer interface" since an interface for provisioning a VLAN in a network having selecting and associating functions must be a computer interface.

Applicants argue in page 11 that the present invention, as claimed, is directed to a method of increasing the number of possible actual VLANs beyond the usual 4096 limit. Examiner respectfully disagrees. None of the pending claims recites "a method of increasing the number of possible actual VLANs beyond the usual 4096 limit" as argued by the Applicants.

Applicants argue in page 12 that Gai does not teach a method of provisioning a backbone VLAN. A backbone VLAN is a path through the core of a network, defined by the switching rules for the stackable trunk ports, which is able to carry a number of VLANs. The backbone VLAN uses a field which is in addition to the usual VLAN ID field in order that the various core routers through which the backbone VLAN passes are able to switch packets to appropriate stackable trunk ports. Examiner respectfully disagrees. Gai discloses in Fig. 4, a method of provisioning a plurality of logical VLANs in a network. Herein, a VLAN among the VLANs is considered as a backbone VLAN by the Examiner. Claim 1 does not recite that "a backbone VLAN is a path through the core of a network, defined by the switching rules for the stackable

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trunk ports, which is able to carry a number of VLANs. The backbone VLAN uses a field which is in addition to the usual VLAN ID field in order that the various core routers through which the backbone VLAN passes are able to switch packets to appropriate stackable trunk ports” as argued by the Applicants. Therefore, Applicants' arguments are not directed to the claimed invention.

Applicants argue in page 12 that Gai does not disclose obtaining at least one backbone VLAN ID. Further, there is no way equivalent to a backbone VLAN ID, since a backbone VLAN ID identifies a backbone VLAN which, as explained above, may carry a multitude of vLANs over a single trunk. Examiner respectfully disagrees. Gai discloses in Fig. 5C that each VLAN is associated with a color. Herein, the color represents the VLAN ID. Further, it should be noticed that Applicants' explanations are not part of the claims. Therefore, Examiner does not interpret the claims in such a way as, should be interpreted, by the Applicants.

Applicants argue in page 13 that Gai does not disclose selecting a plurality of backbone VLAN trunks. Examiner respectfully disagrees. Gai discloses that the switches 230-246 associate their respective trunk ports that are coupled to links 248 with the VLAN designations or domains associated with the various LANs, hosts, end stations, servers, etc...(col. 7, lines 10-15. Herein, links are selected as part of VLAN designations).

Applicants argue in page 13 that Gai does not disclose associating the backbone VLAN IDs with each one of the plurality of backbone VLAN trunks and wherein the selection and association of the backbone VLAN IDs with the backbone VLAN trunks is undertaken irrespective of an in-use and a stand-by designation of the backbone VLANs trunks. Examiner respectfully disagrees. Gai discloses that (col. 9, lines 34-37 and col. 10, lines 37-41) for each

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logical VLAN, the network administrator preferably defines a set of physical VLANs for association with the given logical VLAN. The set of physical VLANs associated with each logical VLAN are preferably configured and established so that, for every link 248 of network 200, there is at least one physical VLAN within that set whose loop-free topology has that link 248 in the blocked state. As further illustrated in Fig. 5C, RED logical VLAN includes physical VLANs 10-13. Herein, each physical VLAN includes a number of trunks 248 for interconnecting the switches. Further, each physical VLAN is designated as ACTIVE, STAND-BY, and UNUSABLE. This implies that the trunks in the physical VLANs associated with each logical VLAN are undertaken irrespective of a one in-use and/or stand-by designation. Herein, each trunk among the trunks in the active vLAN and stand-by vLANs of a logical VLAN is associated with the logical VLAN ID regardless whether that trunk is an active trunk or a stand-by trunk of an active VLAN or stand-by VLANs.

Applicants' arguments regarding claims 17, 24, and 30 on pages 14-17 are similar to the presented claim 1. Therefore, Examiner's positions are applied to claim 1 as well as claims 17, 24, and 30.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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avl

Index of Claims

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Examiner

Anh-Vu H. Ly

Applicant(s)/Patent under
Reexamination

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✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
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A	Appeal
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Claim		Date									
Final	Original	1/5/08									
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